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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,355	07/17/2006	Yoshihiro Kanda	064766-0019	3030
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EXAMINER				
AGUSTIN, PETER VINCENT				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/586,355

**Applicant(s)**

KANDA, YOSHIHIRO

**Examiner**

Peter Agustín

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) 6 and 8 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 4, 5 and 7 is/are rejected.  
7) ☒ Claim(s) 2 and 3 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 17 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This application is a national stage entry of PCT/JP05/00339, filed on January 14, 2005.
2. Claims 1-8 are currently pending.

#### ***Election/Restrictions***

3. Applicant's election of Group I, claims 1-5 & 7, in the reply filed on July 2, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

4. Claims 6 & 8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on July 2, 2008.

#### ***Priority***

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

6. Figures 8-11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

7. Claim 1 is objected to because of the following informalities:

Claim 1, line 9: "resultant" should be --result--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4, 5 & 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Dekker et al. (US 6,683,833).

In regard to claim 1, the admitted prior art discloses a repetitive control device (Figure 8) comprising: an adder (2) to which a compensated signal is inputted; a feedback signal system (6, 7 & 10) for sequentially updating and storing an output signal from the adder, and outputting the signal to the adder; said feedback signal system comprising, a filter (6), a memory (7) which stores signal information for one rotation of a disc into divided plural memory areas of the memory (see Figure 9 and page 3, paragraph 3), a gain element (10) which multiplies an output from the filter by a value ( $\beta$ ) not larger than 1 (page 3, last paragraph), and inputs the resultant to the adder (2), and said memory being operated using a clock signal (output of 8 & 9) that is equal to an operation frequency of a driving signal, or a divided frequency thereof (see page 3, second to the last paragraph).

In regard to claim 4, the admitted prior art discloses that said filter (6) includes a low-pass filter (page 3, lines 6-7),

In regard to claim 5, the admitted prior art discloses that said filter (6) is a band-pass filter comprising a low-pass filter and a high-pass filter (page 3, lines 6-10).

However, the admitted prior art discloses that the filter and the memory are separately provided, i.e., the admitted prior art does not disclose: in regard to claim 1, “a filter which has, as a delay element, a memory”. Furthermore, the admitted prior art discloses that the memory is operated using a clock signal, i.e., the admitted prior art does not disclose: in regard to claim 1, that said filter is operated using a clock signal. Furthermore, the admitted prior art does not disclose: in regard to claims 4 & 5, that said filter uses said memory as a delay element for the low-pass filter.

Dekker et al. disclose: in regard to claim 1, a filter (Figure 2, element 25) which has a memory (36) as a delay element (see Figure 4).

It would have been obvious to one of ordinary skill in the art at the time of invention to have integrated the filter and memory of the admitted prior art as suggested by Dekker et al., the motivation being to provide a control system which is insensitive to variations in angular velocity and which yet has a relatively high stability (column 1, lines 53-57). It should be noted that this combination of references automatically results with a filter that uses the memory as a delay element for a low-pass filter, as recited in claims 4 & 5.

In regard to claim 7, the admitted prior art discloses an optical disc device (Figure 8) performing recording or playback of an optical disc, which is equipped with a repetitive control device as defined in claim 1.

***Allowable Subject Matter***

10. Claims 2 & 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record alone or in combination fails to teach or suggest:

in claim 2, “wherein said filter has a register connected in parallel with the memory, and records higher-order bit data of an input signal in the memory while records lower-order bit data in the register, during a filtering process by the filter”.

Claim 3 is dependent upon claim 2.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Umezawa et al. (US 5,790,492) disclose a crosstalk canceler with a digital filter for producing a pseudo-crosstalk component, wherein a 1-bit memory delays a data signal and the filter produces the pseudo-crosstalk component indicating the crosstalk components from a recording track.

Kishimoto et al. (US 6,567,357) disclose an optical disk apparatus including a surface deflection measuring part for measuring values of a delay circuit of a low-pass filter (composed of a delay circuit, an adder and a multiplier) for extracting a low-pass component in a compensating filter, and outputs measurement results to the surface deflection storage memory.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Agustin whose telephone number is (571) 272-7567. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Vincent Agustin/  
Patent Examiner, Art Unit 2627